

What does TLC mean?

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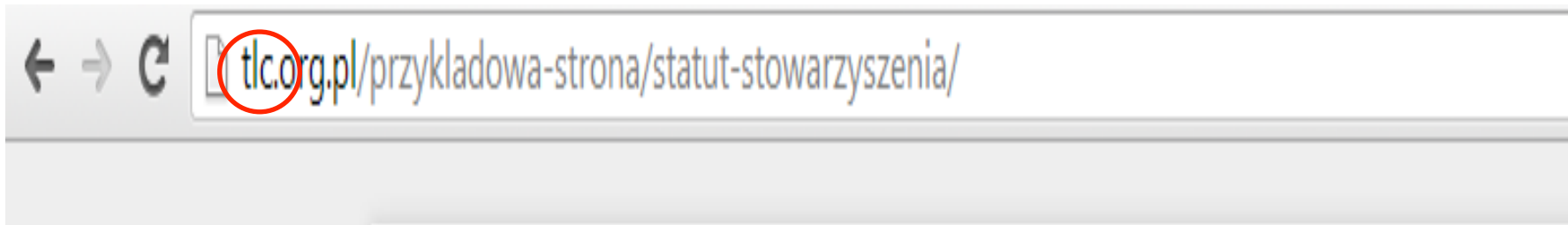


THIN LAYER CHROMATOGRAPHY

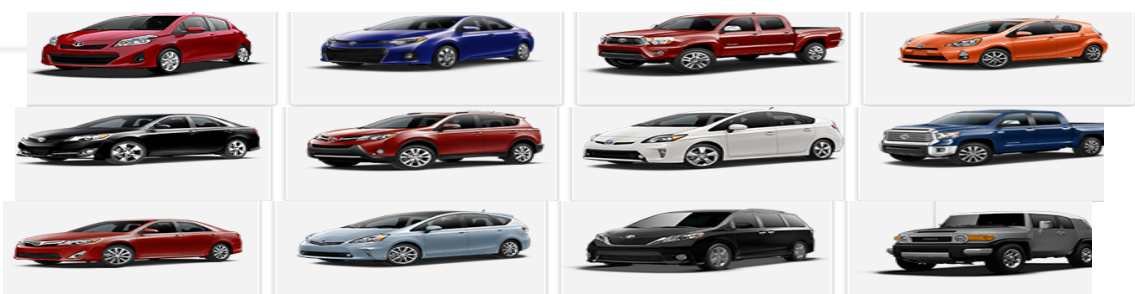
TLC



International Symposium for Thin-Layer Chromatography. Lvov. 02nd-04th Julv 2014



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tlcpomaga2013_main_tlcorgpl2

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TLC POMAGA

www.tlcpomaga.pl
www.tlc.org.pl

TLC helps within Finale of the Great Orchestra of Christmas Help

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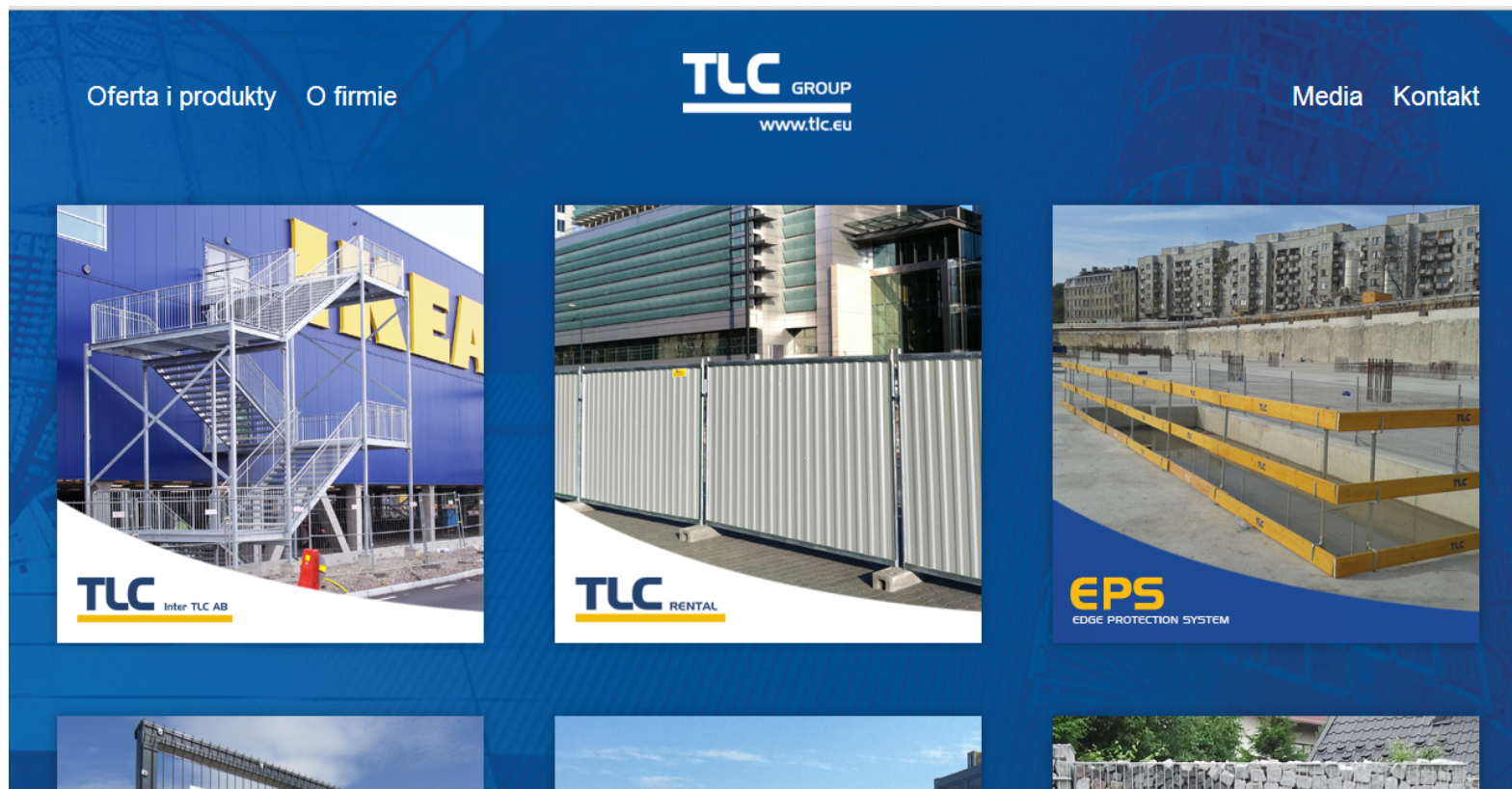


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TLC Łożyska Sp.J. Comprehensive customer
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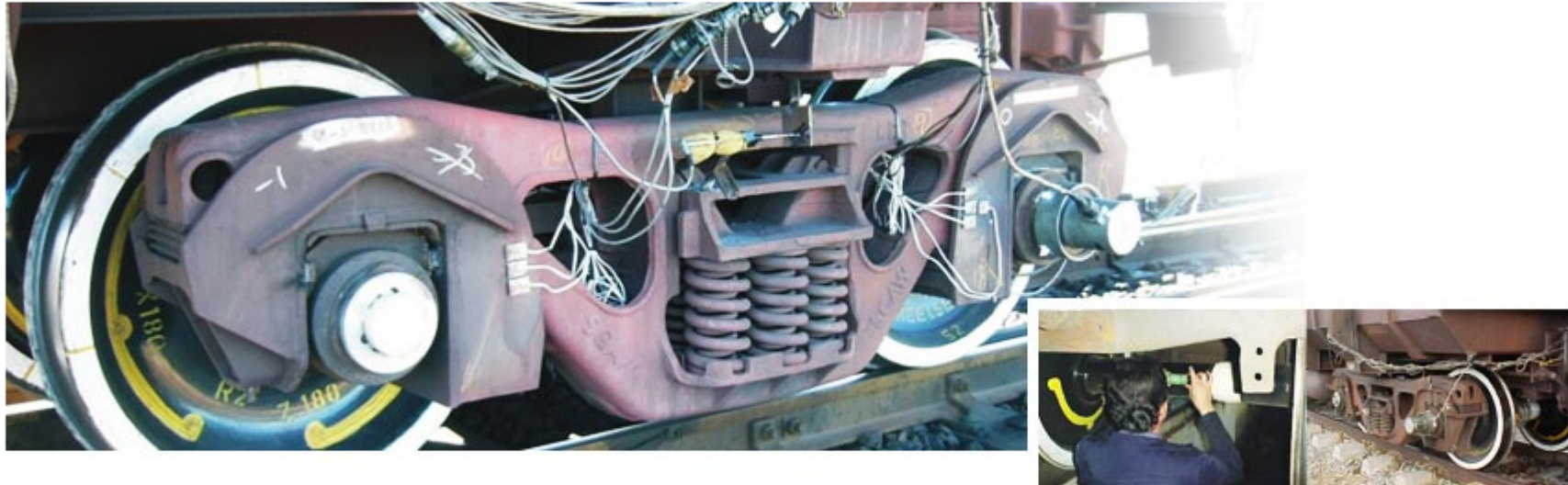


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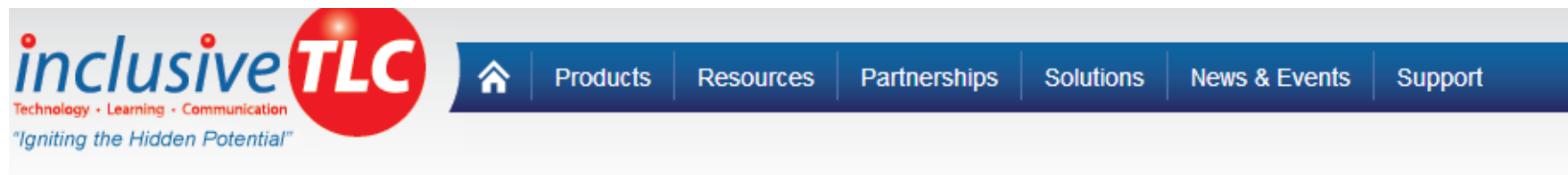
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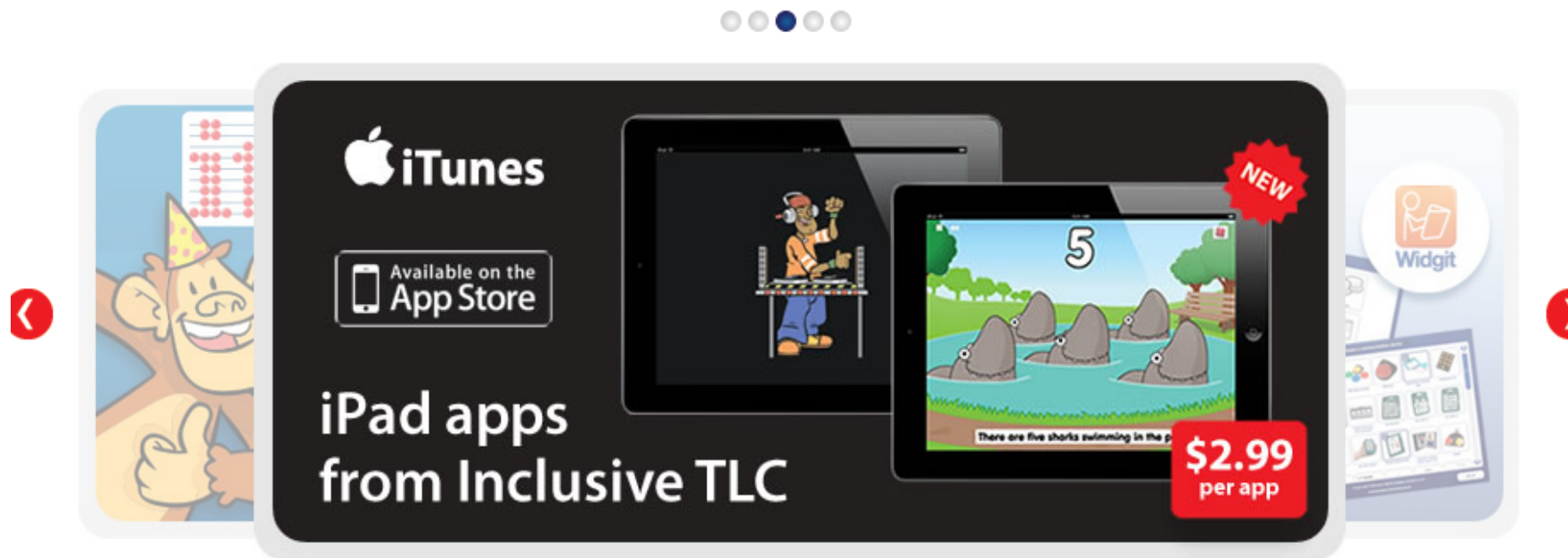
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**American television channel owned by the company
Discovery Communications, was established in 1980.**



tv shows

must watch



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now!

primetime

full schedule

8:00 PM

9:00 PM

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10:30 PM

11:00 PM

12:00 AM



TLC is an American girl group whose repertoire spanned R&B, hip hop, soul, funk, and new jack swing.





The Leaky Cauldron, also called Leaky, **TLC**, or Leaky News, is a *Harry Potter* fansite and blog





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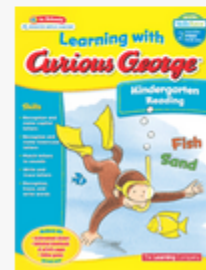
Learning with Curious George ©



Curious George



Curious George



Curious George



Curious George



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[/ http://www.tlc.edu](http://www.tlc.edu) Trinity Lutheran College, located in Everett, WA, is a Christian liberal arts college offering degrees in Business, Communications, Graphic Design, Psychology.



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Campus News

Track and Field Team signed six more athletes

Track and Field team concludes inaugural season at NCAA National Championship



The Language Company

The screenshot displays the website's header with navigation links: Home | Agent Login | About Us | Locations | Forms & Downloads | Contact Us | Apply Now | Career Opportunities. A language selector dropdown is set to 'Wybierz język' with a search icon to its right. Below the header is a main navigation bar with links for Programs, Accommodations, Prices and Fees, Policies, and Academic Placement. The main content area features a large banner for Berkeley, California, with the company logo (a stylized 'TL' in blue, yellow, and red) and 'U.S.A.' text overlaid. A sidebar menu on the left lists: About TLC-Berkeley (highlighted with a red circle), Area Information, Photo Gallery, and Other Locations. The 'About the Center' section includes a video player titled 'The Language Company in Berkeley, California' and a portrait of Patrick Wolak, Director. A call to action at the bottom left reads 'Please click here to APPLY ONLINE' with a logo.



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trichotillomania
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This organization changed my child's life. After struggle, thousands of dollars in therapy, we found your group. He attended TLC. It had a profound impact on her. She is more confident, happy, & pulling, which is under good control. TLC Programs Change Lives. Don't school picture in 5 years! And did her



1 2 3 ||



Therapeutic Lifestyle Changes ^{Stretching} (TLC)

⇒ Diet



⇒ Weight loss



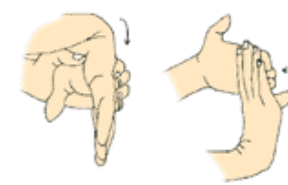
⇒ Stop smoking
cigarettes



⇒ Reduce stress



Pectoralis stretch



Wrist stretch



Upper trapezius stretch



Standing hamstring stretch



Quadriceps stretch



Standing calf stretch



Hip flexor stretch



Piriformis stretch



Hip adductor stretch

TLC is the organization in the world focused on treatment, research, and outreach for people with trichotillomania, skin picking and related disorders

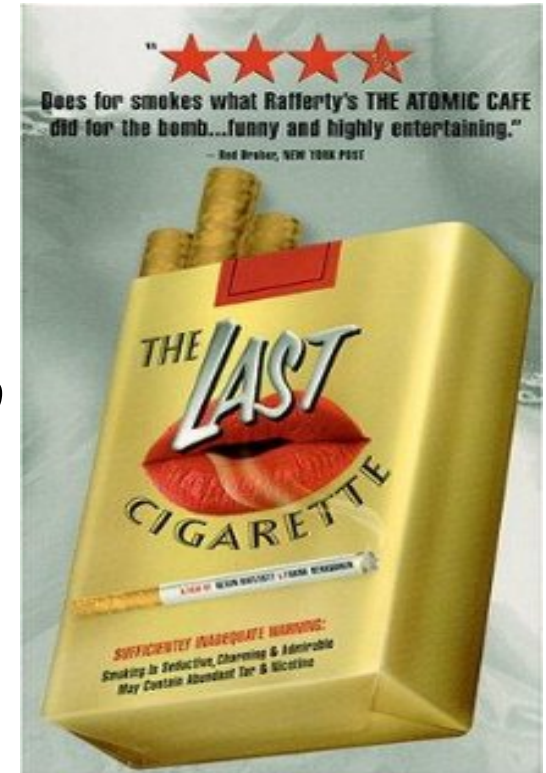


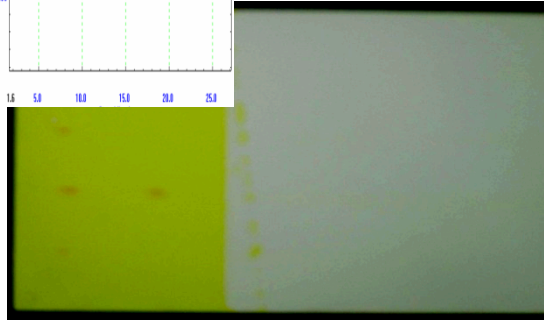
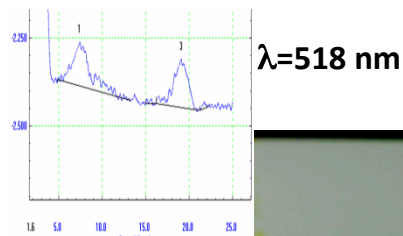
The Last Cigarette

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https://www.healthlink.com/health_tlc.asp

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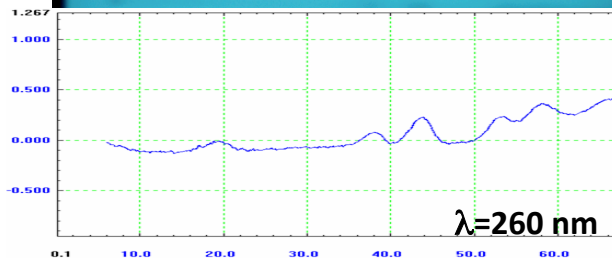
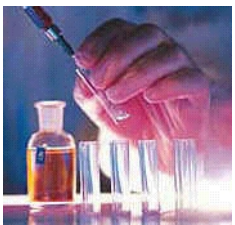
HPTLC plates (RP-18)

After derivatisation with Dragendorff's reagent



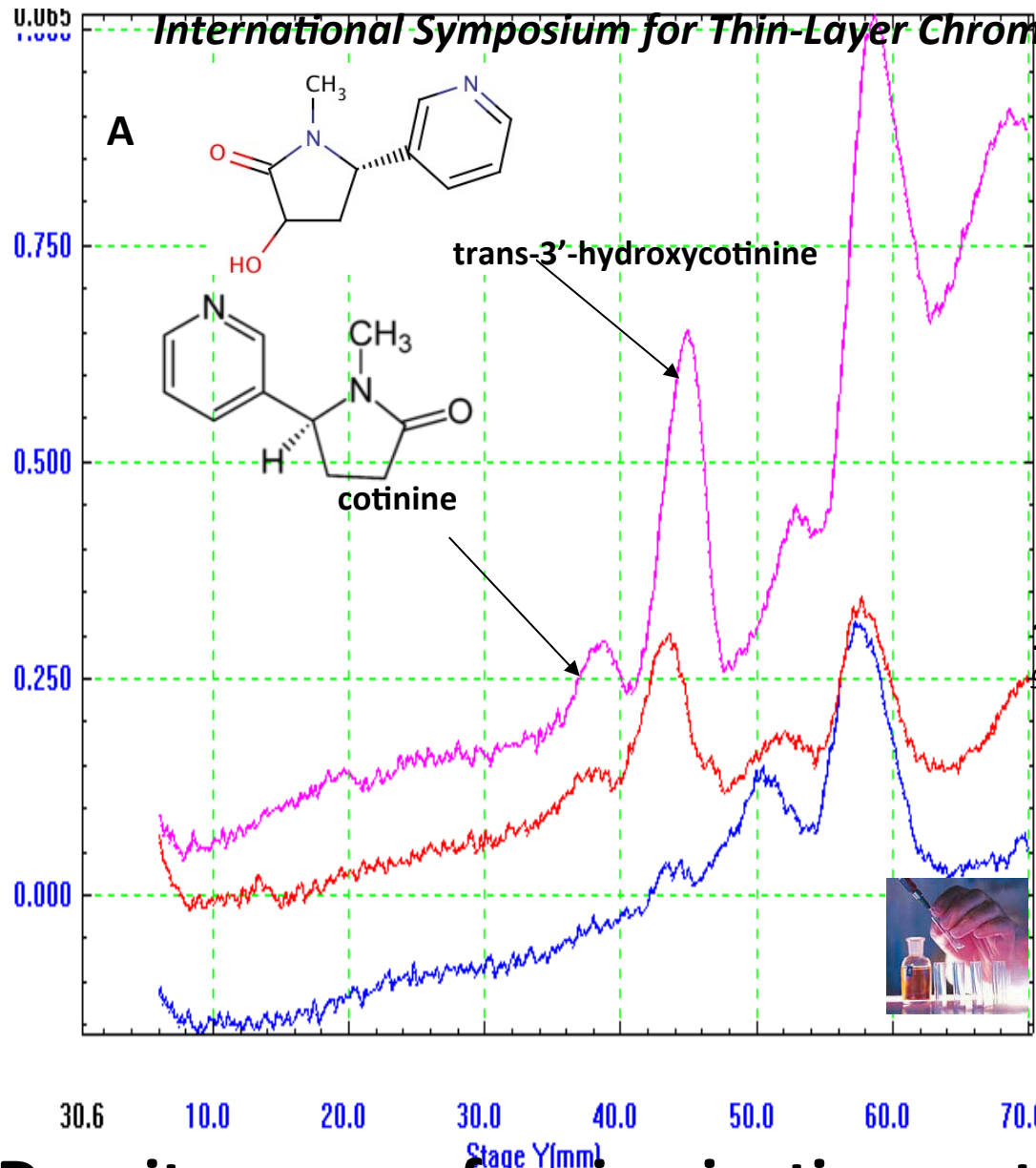
Mobile phase:

acetonitrile-water, (88+12, v/v + 50 mg/
100mL sodium octanosulfonate)



Nicotine-1 and its metabolites-2,3,4 identified in smoker urine (15 cigarettes/day) by planar chromatography technique with densitometry.





15cigarettes/day
4th experiment day



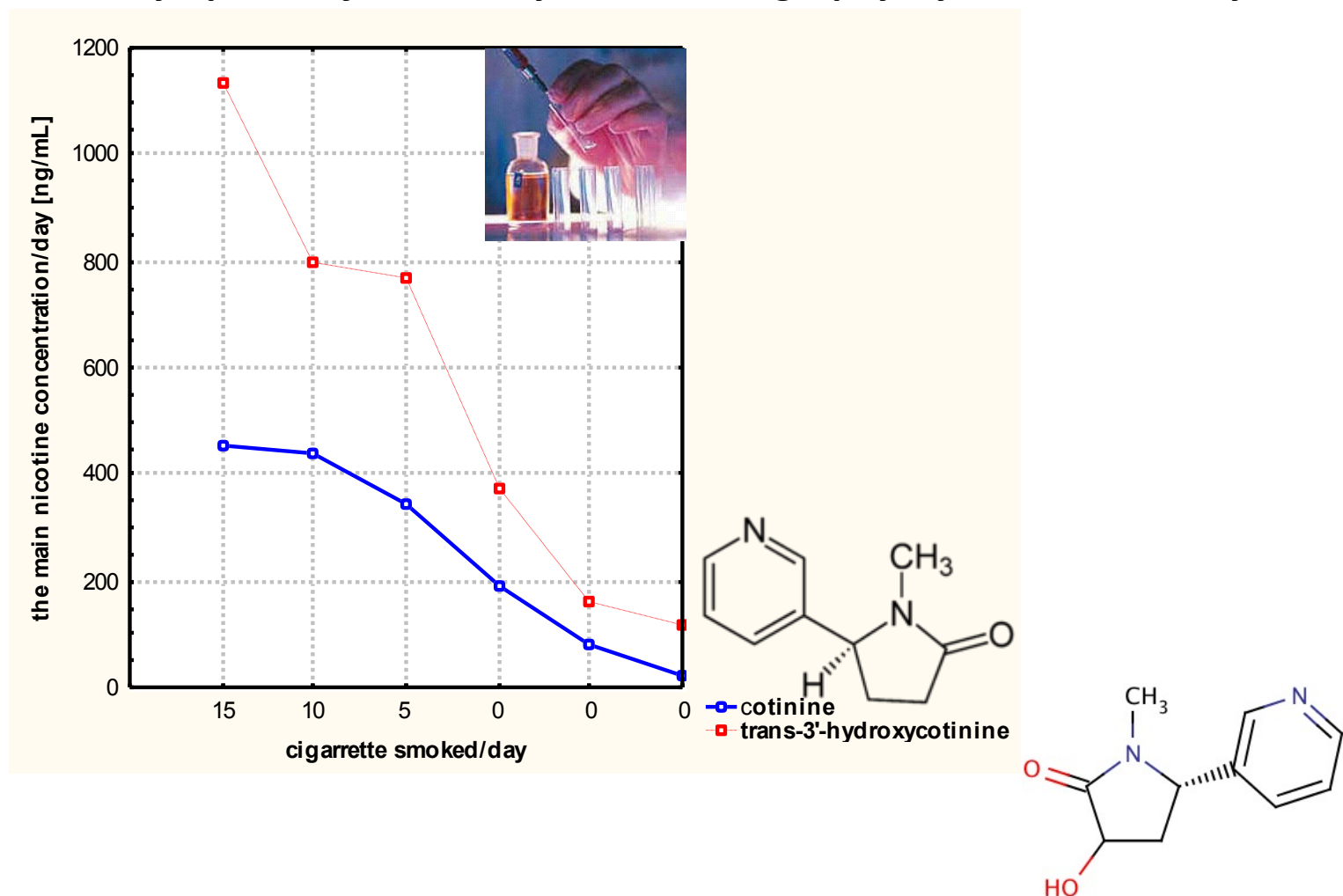
10 cigarettes/day
9th experiment day

0 cigarettes/day
25th experiment day

HPTLC RP18 plate/ acetonitrile-water
(88+12, v/v + 50 mg/mL sodium
octanosulfonate) UV absorbance at $\lambda=$
260 nm, zigzag scanning mode) using a
CS9301 PC scanner (Shimadzu).

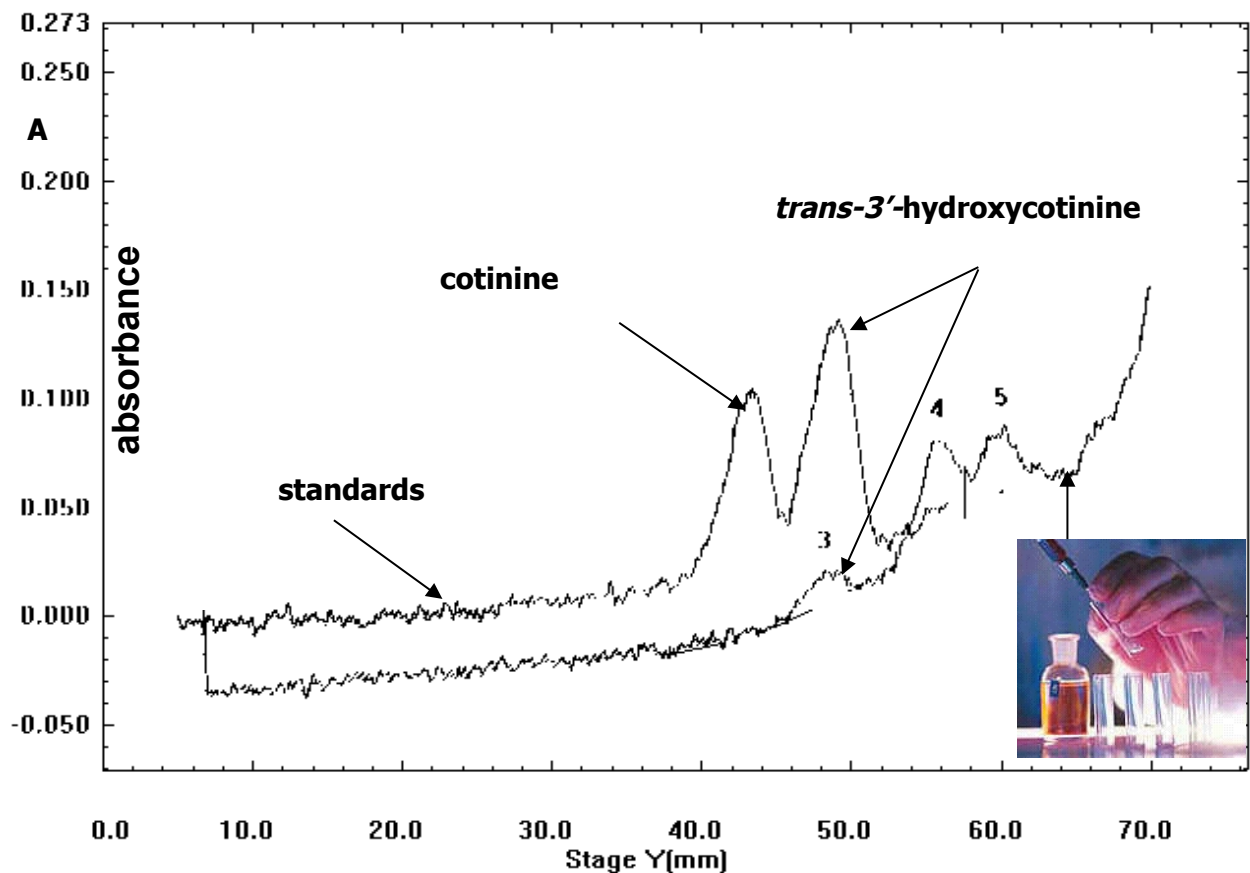
**Densitograms of main nicotine metabolites determined
in urine and amount of cigarettes/day in smoking
cessation process**





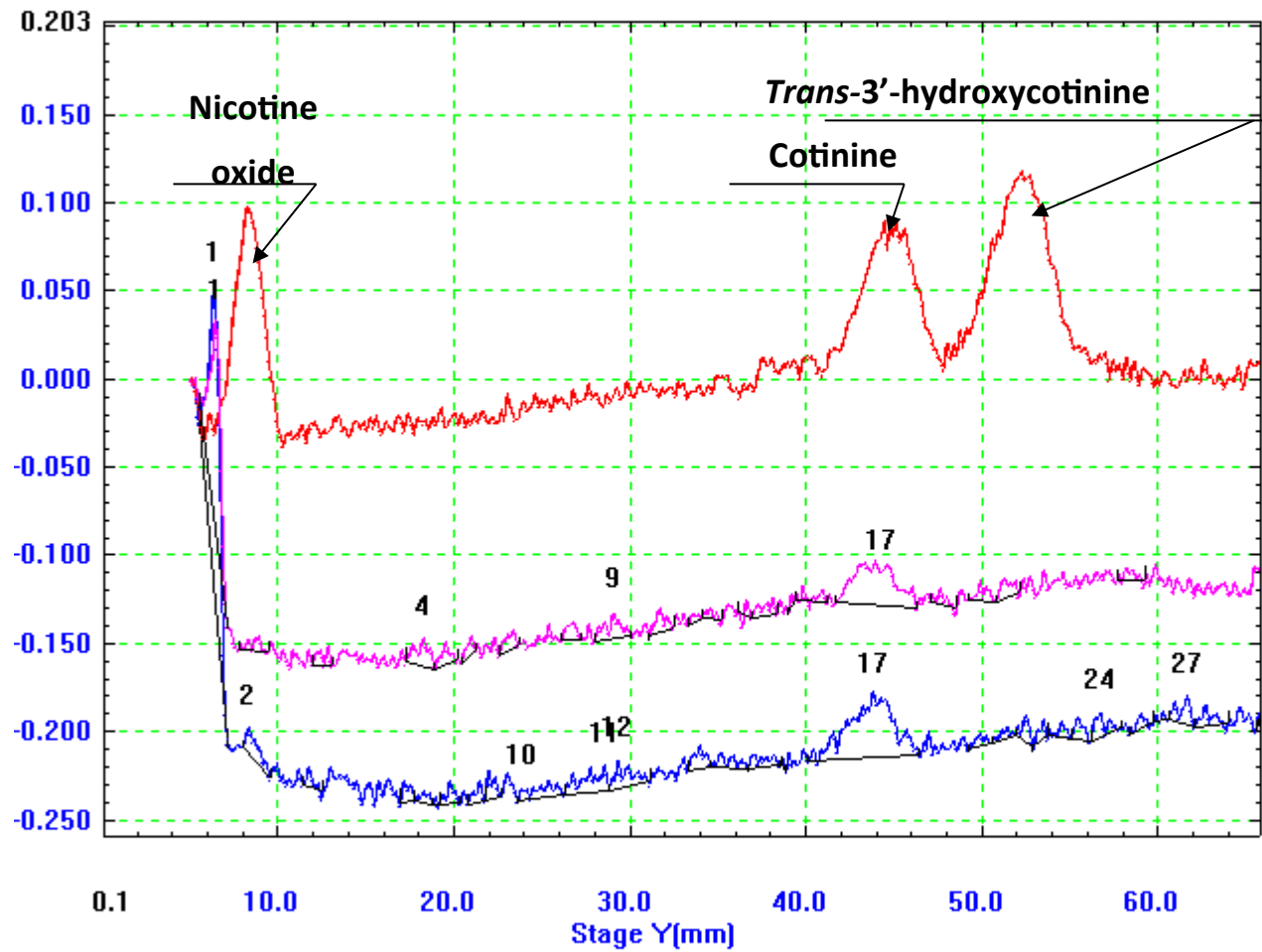
Dependence between main nicotine metabolites concentration in urine determined by HPTLC with densitometry and amount of cigarettes/day in smoking cessation process





Densitogram of student urine extract who declared non smoking status and in which trans-3'- hydroxycotinine was identified by (HP)TLC with densitometry. C18/acetonitrile-water (88+12, v/v; with 50 mg of sodium 1-octanesulfonate /100mL) $\lambda = 260$ nm





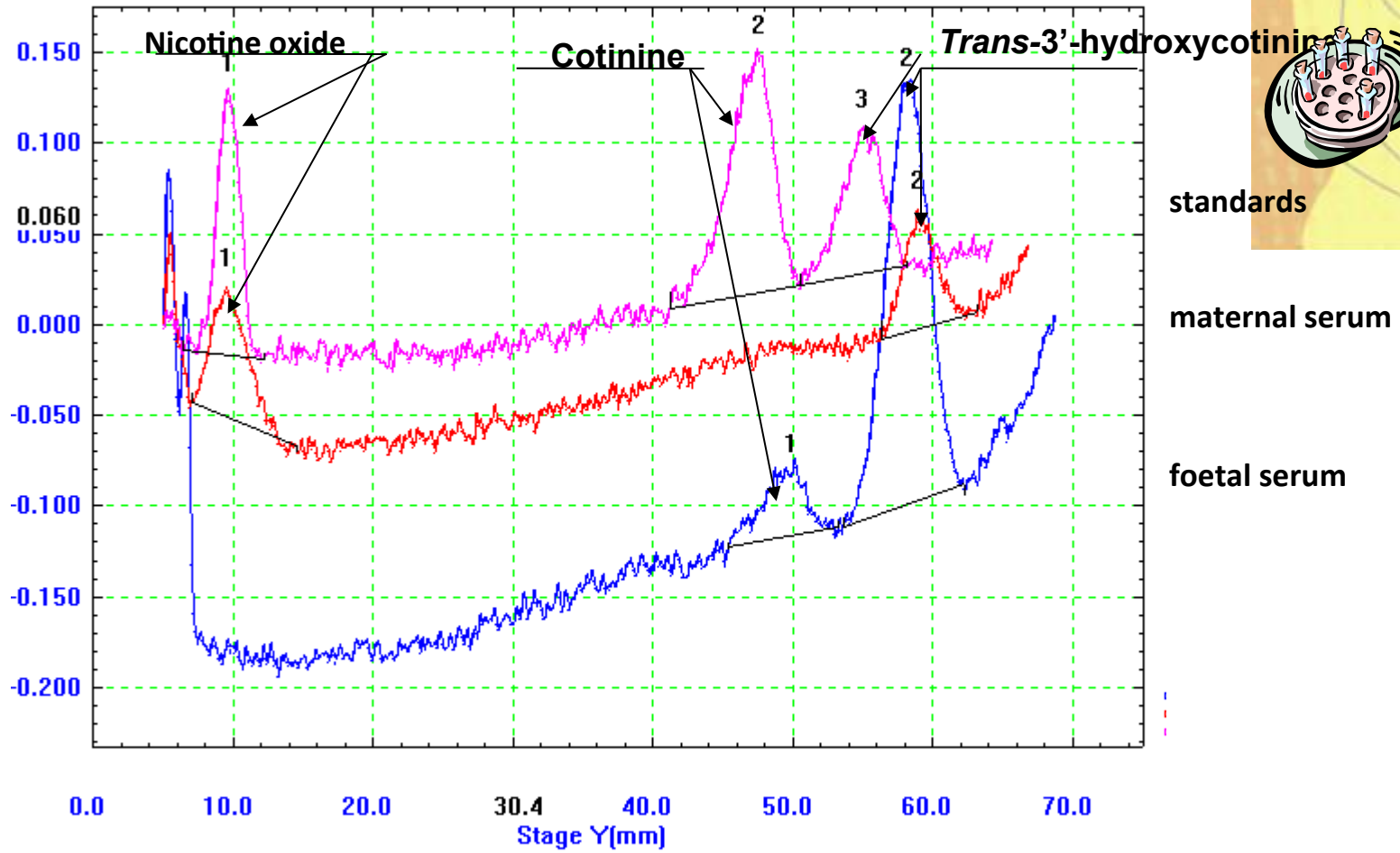
standards

maternal serum extract

foetal serum extract

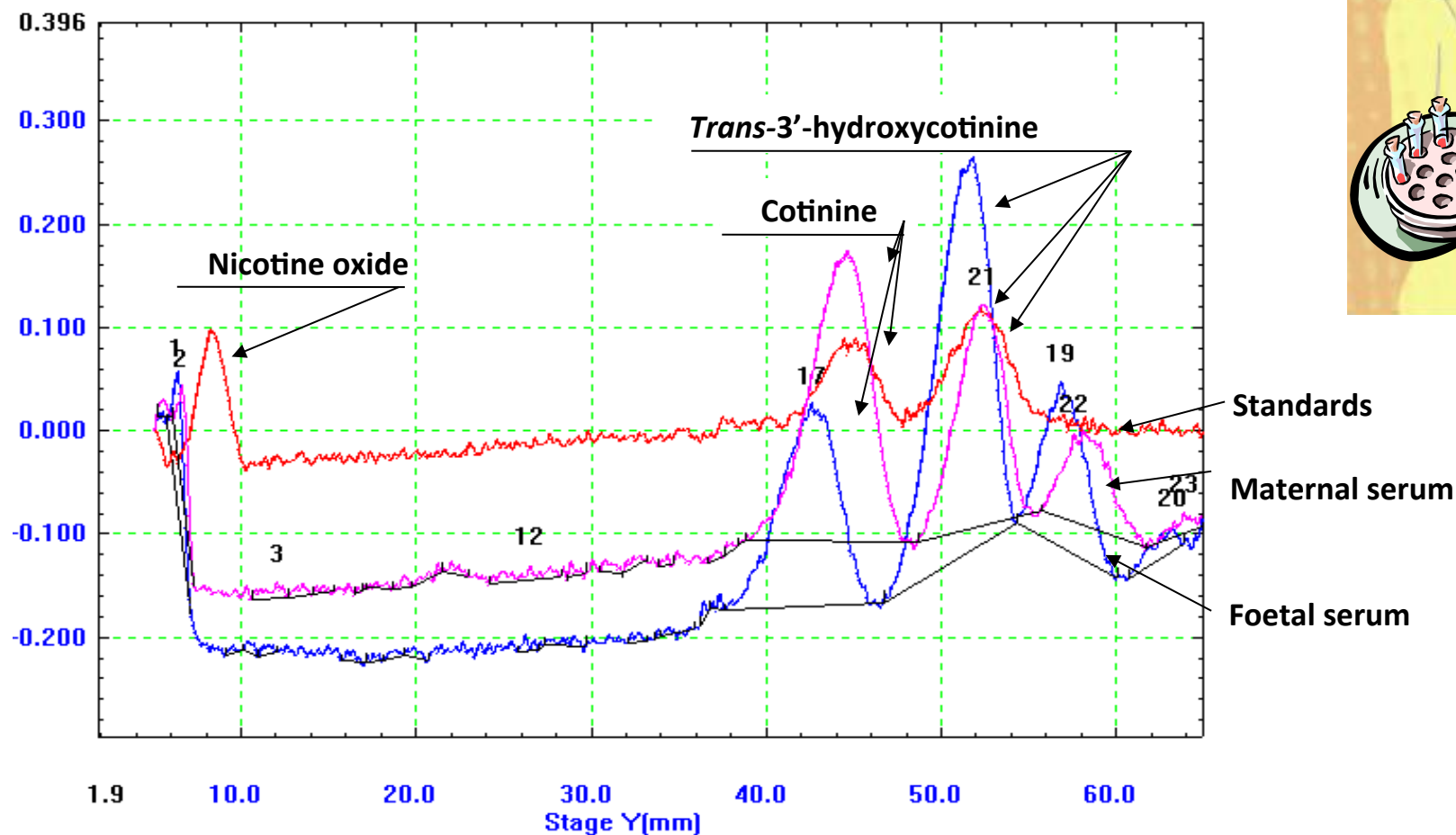
Comparison of the main nicotine metabolites concentration isolated from maternal and foetal serum determined by HPTLC with densitometry





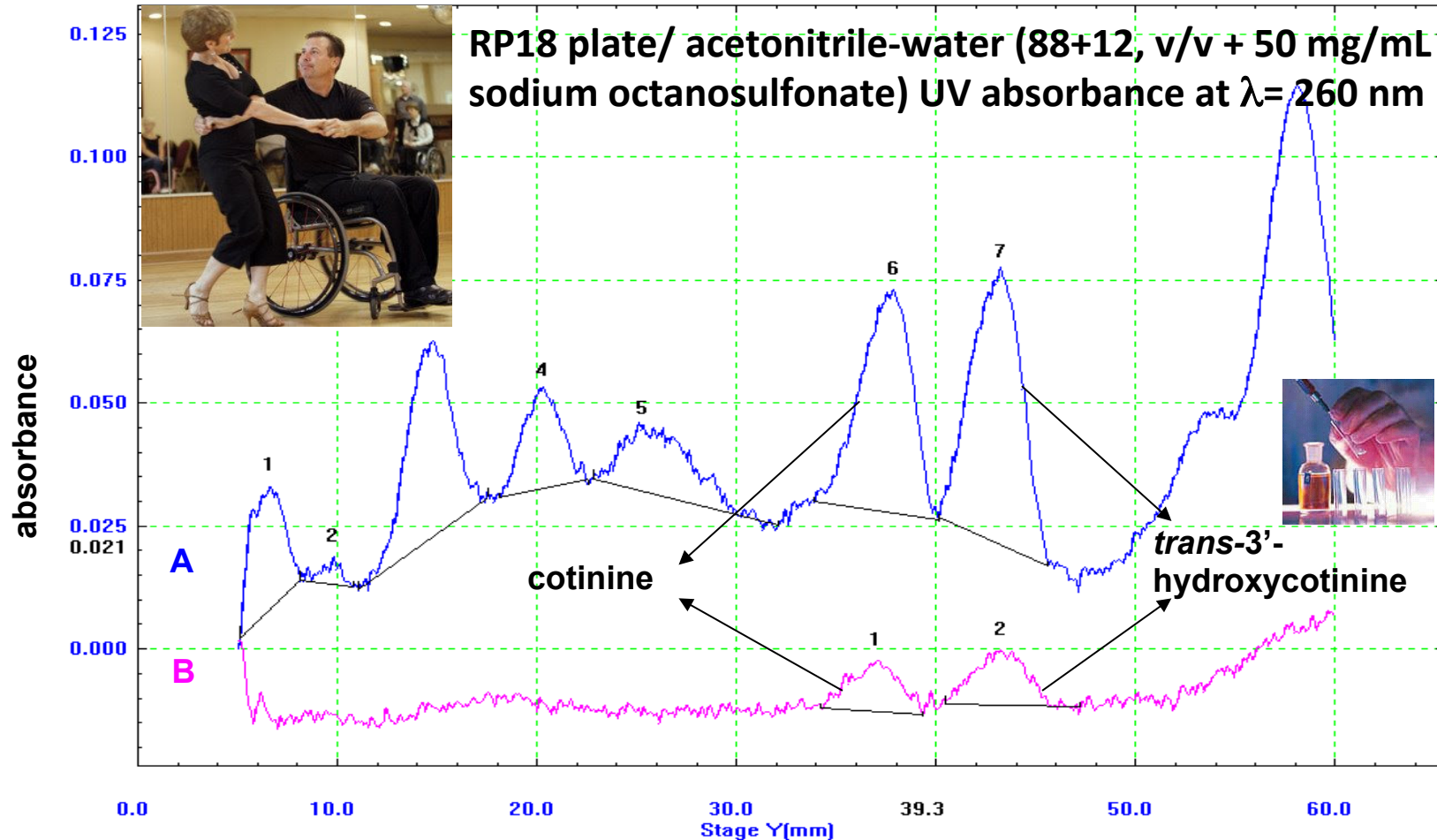
Comparison of the main nicotine metabolites concentration isolated from maternal and foetal serum determined by (HP)TLC with densitometry





Comparison of the main nicotine metabolites concentration isolated from maternal and foetal serum determined by (HP)TLC with densitometry

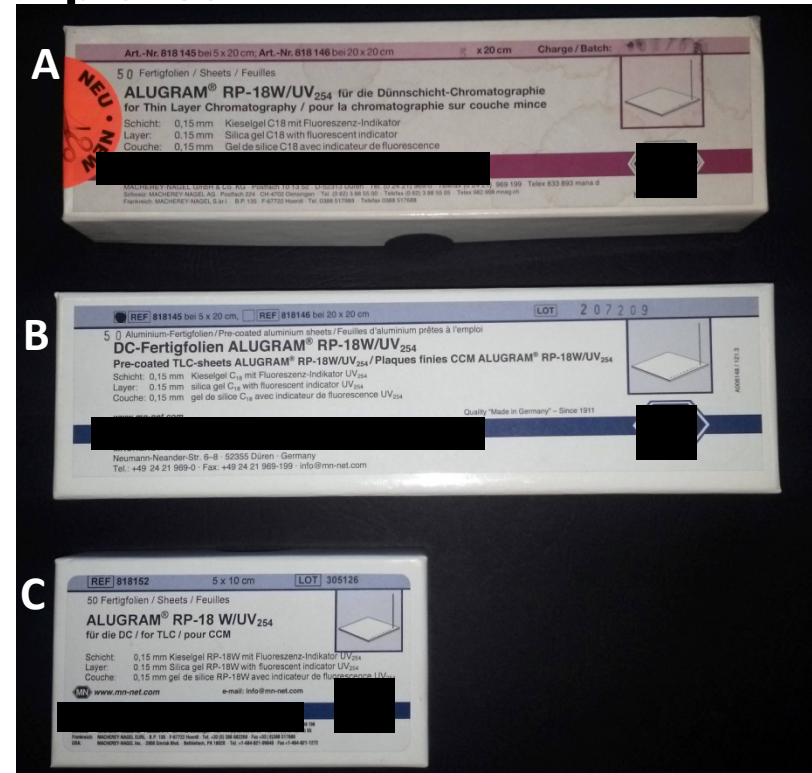
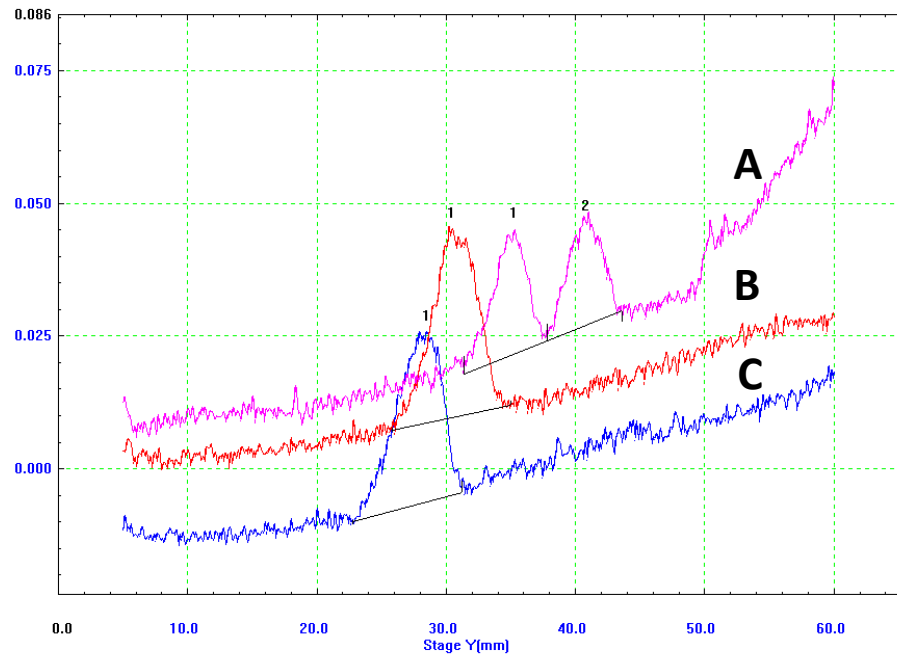




(HP)TLC Densitogram of urinary extract of patient with MS (Multiple Sclerosis) in whom the main nicotine metabolites were determined.



RP18 HPTLC plates

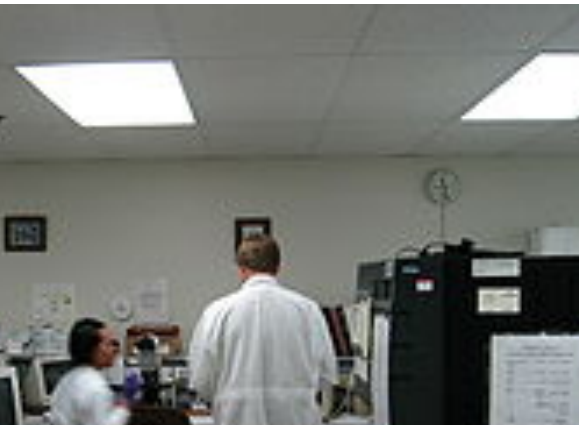


HPTLC RP18 plates/ acetonitrile-water (88+12, v/v + 50 mg of sodium octanosulfonate/100mL) UV absorbance at $\lambda = 260$ nm

- A** – developing distance of 8 cm : **1- cotinine** and **2 – *trans*-hydroxycotinine**
- B** –developing distance of 10 cm (standards do not separate)
- C** –developing distance of 8 cm (standards do not separate)



Technicians are guilty?

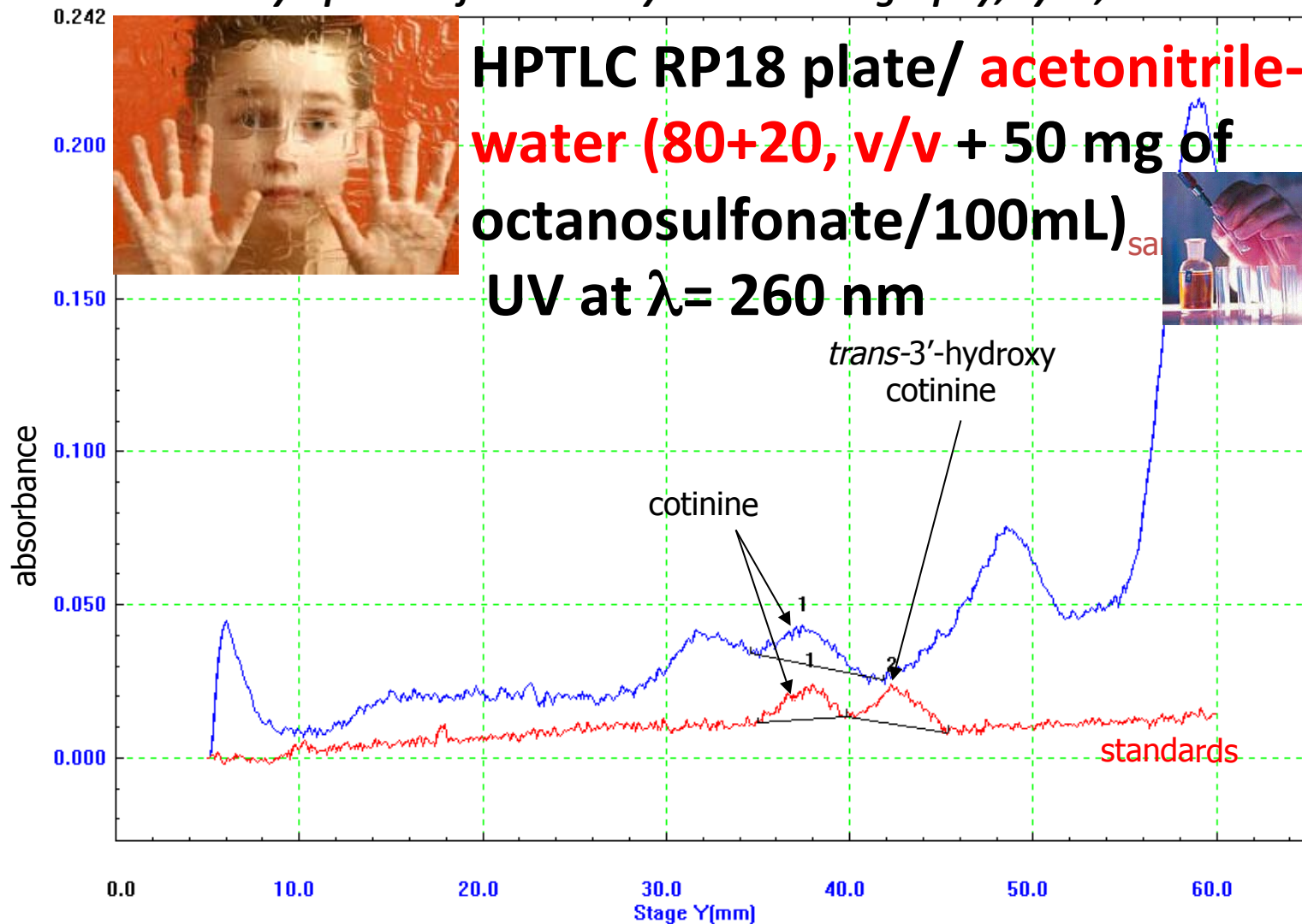


Something wrong with apparatus?



Standards?





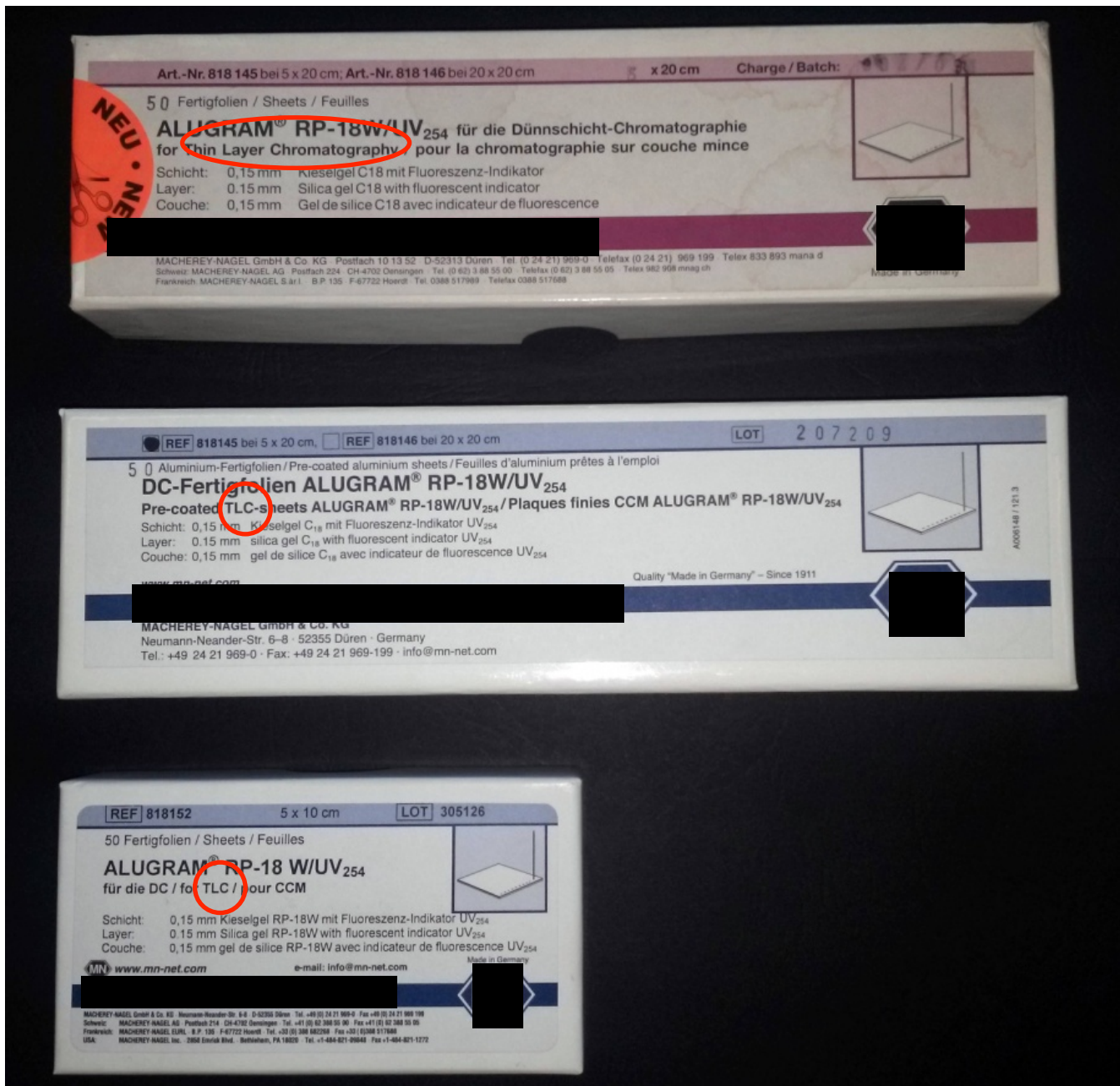
Cotinine identified in urine of autistic child



Conclusions

TLC can have various meanings for different groups of societies and for people in different countries . But it can also be problematic for chromatographers.





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back to TLC start page

Summary of [redacted] phases for TLC

G glass plates
 P POLYGRAM® polyester sheets
 A ALUGRAM® aluminium sheets
 AX ALUGRAM® Xtra aluminium sheets

Available supports				Phase	Description
Standard silica					
G				ADAMANT	silica 60, improved binder system, optimized particle size distribution
G	P	A	AX	SIL G ALUGRAM® Xtra SIL G	silica 60, standard grade, particle size 5–17 µm ALUGRAM® Xtra: as above, on aluminium, outstanding wettability, improved cutting properties
G				DURASIL	silica 60, special binder system
	P			SIL N-HR	high purity silica 60, special binder system, higher gypsum content
Modified silica for HPTLC					
G				Nano-SIL C18-50 / C18-100	nano silica with partial or complete C18 modification
G		A		RP-18 W	nano silica with partial octadecyl modification, wettable with water
G		A		RP-2	silanized silica = dimethyl-modified silica 60
G		A		Nano-SIL CN	cyano-modified nano silica



Ordering information

Designation	Thickness of layer	Plate size	Fluorescent indicator	Plates per pack	REF
ALUGRAM® aluminium sheets					
RP-18 W/UV ₂₅₄	0.15 mm	4 x 8 cm	UV ₂₅₄	50	818144
RP-18 W/UV ₂₅₄	0.15 mm	5 x 10 cm	UV ₂₅₄	50	818152
RP-18 W/UV ₂₅₄	0.15 mm	5 x 20 cm	UV ₂₅₄	50	818145
RP-18 W/UV ₂₅₄	0.15 mm	10 x 10 cm	UV ₂₅₄	25	818147
RP-18 W/UV ₂₅₄	0.15 mm	20 x 20 cm	UV ₂₅₄	25	818146



Conclusions

If TLC chromatographic plates used in our researches were properly marked by HPTLC (High Performance Thin Layer Chromatography), confusion caused by various meaning of TLC abbreviation would be eliminated.





Thank you for your attention 😊

*International Symposium for Thin-Layer Chromatography, Lyon,
02nd-04th July 2014*

